

CLAIMS

1. An aldehyde-inhibiting composition which inhibits an aldehyde from an aldehyde-generating source, 5 and comprises a carboxylic acid hydrazide and a metal salt of a hydroxy polycarboxylic acid.

2. An aldehyde-inhibiting composition according to claim 1, wherein the metal salt of the hydroxy polycarboxylic acid comprises a salt of a hydroxy aliphatic 10 polycarboxylic acid with at least one metal selected from the group consisting of an alkali metal, an alkaline earth metal, a metal of Group 3A, a metal of Group 4A, a metal of Group 5A, a metal of Group 6A, a metal of Group 7A, a metal of Group 8, a metal of Group 1B, a metal of Group 15 2B, a metal of Group 3B, and a metal of Group 4B of Periodic Table of the Elements.

3. An aldehyde-inhibiting composition according to claim 1, wherein the carboxylic acid hydrazide comprises at least one member selected from the group consisting of 20 an aliphatic carboxylic acid hydrazide, an alicyclic carboxylic acid hydrazide, an aromatic carboxylic acid hydrazide and a dimer or trimer acid hydrazide, and the metal salt of the hydroxy polycarboxylic acid comprises a salt of a hydroxy C₃₋₂₂aliphatic di- to tetracarboxylic acid with an alkaline earth metal.

4. An aldehyde-inhibiting composition according to claim 1, wherein the metal salt of the hydroxy

polycarboxylic acid comprises a salt of citric acid, malic acid, or tartaric acid with an alkaline earth metal.

5. An aldehyde-inhibiting composition according to claim 1, wherein the metal salt of the hydroxy polycarboxylic acid is a hydrate salt.

6. An aldehyde-inhibiting composition according to claim 1, wherein the metal salt of the hydroxy polycarboxylic acid comprises a calcium citrate or a magnesium citrate.

10 7. An aldehyde-inhibiting composition according to claim 1, wherein the proportion of the metal salt of the hydroxy polycarboxylic acid is 0.01 to 100 parts by weight relative to 1 part by weight of the carboxylic acid hydrazide.

15 8. An aldehyde-inhibiting composition according to claim 1, which further comprises at least one member selected from the group consisting of an adsorbent and a resin.

20 9. An aldehyde-inhibiting composition according to claim 1, which comprises an aldehyde-inhibiting component at least containing the carboxylic acid hydrazide and the metal salt of the hydroxy polycarboxylic acid, and the inhibiting component is held or supported on a substrate.

25 10. A polyacetal resin composition which comprises a polyacetal resin and an aldehyde-inhibiting composition, wherein the aldehyde-inhibiting composition inhibits an aldehyde from an aldehyde-generating source and comprises

a carboxylic acid hydrazide and a metal salt of a hydroxy polycarboxylic acid.

11. A polyacetal resin composition according to claim 10, wherein the proportion of the aldehyde-inhibiting 5 composition is 0.001 to 20 parts by weight relative to 100 parts by weight of the polyacetal resin.

12. A polyacetal resin composition according to claim 10, which further comprises at least one member selected from the group consisting of an antioxidant, a 10 heat stabilizer, a processing stabilizer, a weather (light)-resistant stabilizer, an impact resistance improver, a gloss control agent, a sliding improver, a coloring agent, and a filler.

13. A polyacetal resin composition according to 15 claim 12, wherein the antioxidant comprises at least one member selected from the group consisting of a hindered phenol compound and a hindered amine compound.

14. A polyacetal resin composition according to claim 12, wherein the processing stabilizer comprises at 20 least one member selected from the group consisting of a higher fatty acid or a derivative thereof, a polyoxyalkylene glycol, and a silicone compound.

15. A polyacetal resin composition according to claim 12, wherein the heat stabilizer comprises at least 25 one member selected from the group consisting of a basic nitrogen-containing compound, a phosphine compound, an organic carboxylic acid or a metal salt of an organic

carboxylic acid, an alkali or alkaline earth metal compound, a hydrotalcite, and a zeolite.

16. A polyacetal resin composition according to claim 12, wherein the heat stabilizer comprises at least 5 one member selected from the group consisting of an alkaline earth metal salt of a monocarboxylic acid, and an alkaline earth metal oxide.

17. A polyacetal resin composition according to claim 12, wherein the weather (light)-resistant stabilizer 10 comprises at least one member selected from the group consisting of a benzotriazole compound, a benzophenone compound, an aromatic benzoate compound, a cyanoacrylate compound, an oxalic anilide compound, a hydroxyaryl-1,3,5-triazine compound, and a hindered amine 15 compound.

18. A polyacetal resin composition according to claim 12, wherein the impact resistance improver comprises at least one member selected from the group consisting of 20 an acrylic core-shell polymer, a thermoplastic polyurethane-series resin, a styrenic elastomer, and a thermoplastic polyester-series elastomer.

19. A polyacetal resin composition according to claim 12, wherein the gloss control agent comprises at least 25 one member selected from the group consisting to an acrylic resin and a styrenic resin.

20. A polyacetal resin composition according to claim 12, wherein the sliding improver comprises at least

one member selected from the group consisting of an olefinic polymer, a silicone-series resin, and a fluorine-containing resin.

21. A polyacetal resin composition according to
5 claim 10, which comprises a pellet of the polyacetal resin which is at least coexistent with the aldehyde-inhibiting composition or a master batch containing the aldehyde-inhibiting composition.

22. A process for producing a polyacetal resin
10 composition, which comprises melt-mixing a polyacetal resin and an aldehyde-inhibiting composition recited in claim 1 with an extruder, wherein at least a carboxylic acid hydrazide is fed to the extruder through a side feed port and mixed with the polyacetal resin.

15 23. A process for producing a polyacetal resin composition, which comprises melt-mixing a polyacetal resin and an aldehyde-inhibiting composition recited in claim 1 with an extruder, wherein the average retention time in the extruder is not longer than 300 seconds.

20 24. A molded product formed from a polyacetal resin composition comprising a polyacetal resin and an aldehyde-inhibiting composition which inhibits an aldehyde generation from an aldehyde-generating source and comprises a carboxylic acid hydrazide and a metal salt of a hydroxy
25 polycarboxylic acid.

25. A molded product according to claim 24, wherein
(1) when the molded product is stored in a closed space

for 24 hours at a temperature of 80°C, the emission of formaldehyde therefrom is not more than 1.0 µg per 1 cm² of the surface area of the product, and/or (2) when the molded product is stored in a closed space for 3 hours at 5 a temperature of 60°C under a saturated humidity, the emission of formaldehyde therefrom is not more than 1.2 µg per 1 cm² of the surface area of the product.

26. A molded product according to claim 24, which is an automotive part, an electric or electronic device 10 part, an architectural or pipeline part, a household utensil or cosmetic article part, or a medical device part.